ABSTRACT

It is to provide a lithium ion capacitor having a high energy density, a high output density and a large capacity.

A lithium ion capacitor comprising a positive electrode 1, a negative electrode 2 and an aprotic organic solvent solution of a lithium salt as an electrolytic solution, wherein a positive electrode active material is a material capable of reversibly supporting lithium ions and/or anions, a negative electrode active material is a material capable of reversibly supporting lithium ions and anions, and the potentials of the positive electrode and the negative electrode are at most 2.0 V after the positive electrode and the negative electrode are short-circuited, characterized in that the positive electrode 1 and the negative electrode 2 are alternately laminated with a separator 3 interposed therebetween to constitute an electrode unit 10, the cell is constituted by at least two such electrode units, lithium metal 4 is disposed between the electrode units, and lithium ions are preliminarily supported by the negative electrode and/or the positive electrode by electrochemical contact of the lithium metal with the negative electrode and/or the positive electrode.